Federal Lead Smelter - East Side
LPC# 1190105308/1191155020
Madison County
SF/HRS

CERCLA Preliminary Assessment

Prepared by:
Office of Site Evaluation
Division of Remediation Management
Bureau of Land

SIGNATURE PAGE

Title: CERCLA Preliminary Assessment for Federal Lead Smelter – East Side

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Signature 7/19/18 Date

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PRELIMINARY ASSESSMENT

For:

Federal Lead Smelter – East Side
Alton, Illinois

LPC 1190105308/1191155020
ILN 000 507 845

PREPARED BY:
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF LAND
DIVISION OF REMEDIATION MANAGEMENT
OFFICE OF SITE EVALUATION

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Section 1.0 Introduction

On January 26, 2017, the Illinois Environmental Protection Agency's (Illinois EPA) Office of Site Evaluation was tasked by the United States Environmental Protection Agency (U.S. EPA) Region V to conduct a Preliminary Assessment (PA) at the Federal Lead Smelter (ASARCO)-East Side site in Alton on Cut Street, Madison County, IL (38.87883/-90.14690).

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR Part 300) requires that a Preliminary Assessment be performed on all sites entered into the Superfund Enterprise Management System (SEMS) formerly known as CERCLIS, U.S. EPA's inventory of hazardous waste site.

A Preliminary Assessment is an early step in the Superfund process that utilizes a limited-scope investigation and collects readily available information. The Preliminary Assessment distinguishes between sites that pose little or no threat to human health and the environment and those that require further investigation. The Preliminary Assessment also supports emergency response and removal activities, fulfills public information needs, and generally furnishes appropriate information about the site early in the assessment process.

If the findings of the Preliminary Assessment determine that further investigation is warranted, the site will continue to progress through the Superfund evaluation process and receive a Site Inspection. The Site Inspection will provide necessary information that will help determine if the site qualifies for possible inclusion on the National Priorities List (NPL) or should be archived and receive a No Further Remedial Action Planned (NFRAP) qualifier. At any time throughout the Superfund evaluation process, the site may be assigned NFRAP status, be referred to another state or federal clean-up program, or recommended for another action. The Preliminary Assessment is performed under the authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) commonly known as Superfund.

Section 2.0 Site Background

2.1 Site Description

The Federal Lead Smelter (ASARCO)-East Side site is an abandoned facility located in an industrial setting on 10 Cut Street in Alton, IL. It is located in Section 19, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County. The Federal Lead Smelter-East Side property consists of approximately 52 acres of commercial/industrial land containing multiple buildings which most are dilapidated and not structurally sound. There is a water tower located next to a concrete lined water basin. The buildings present on the west side of the site being investigated for this report were used during the lead smelting process of the Federal Lead Smelter operations and the structure on the east side is from the aluminum smelting process (Figure 1). The aluminum smelting building no longer has walls and appears to be completely stripped.

The investigative property is bounded on the west by Federal Lead Smelter, north by Norfolk and Western rail line, south by wooded timber and Route 143 River Heritage Parkway; the Mississippi River is also so the south approximately 2000 feet, and east by wooded timber and Chessen Lane. The Federal Lead Smelter-East Side was at one-time part of the Federal Lead Smelter (ASARCO) property (Figure 6 & 9). The ASARCO (Federal Lead Smelter) site (ILP000510792) was addressed under the Illinois EPA federal Site Remediation Section (Ramboll Environ 2016). Remedial activities completed at the ASARCO site included, excavation of the Lowland Area, clearing and excavation of the Upland Area, and consolidation of excavated materials in an on-site Containment Area, which was subsequently capped and vegetated. The East Side portion of the Federal Lead Smelter (ASARCO) property was never addressed under the Voluntary Program since this portion of Federal Lead Smelter (ASARCO) had been sold off to other buyers at an earlier date. The facility is also referred to by many different names such as most recently MRC Holdings. Other names include Federal Lead Smelter-East Side, Federated Metals,

U.S. Reduction, American Can Company, ASARCO, and Federal Metallurgy. For this report, Federal Lead Smelter-East Side will be the name used to identify the property being investigated.

The geology of the site is unconsolidated materials consisting of finer-grain, alluvium deposits. The alluvial deposits vary from 70 to 120 feet thick. Below this depth, consolidated bedrock is known to be Mississippian limestone with minor shale and sandstone. Depth to bedrock varies from 93 to 135 feet on industrial sites directly adjacent to the site.

2.2 Site History

The Federal Lead Smelter-East Side site is abandoned property that was at one time used as a primary lead smelting facility and was operated continuously by the Federal Lead Company from 1902-1912 and by ASARCO, Inc from 1912 to 1959 (Figure 6 & 9). Most of the original and process equipment was dismantled or removed during 1961-1962. According to the Madison County tax assessor's office, the property was sold in 1969. The eastern portion of the Federal Lead Smelter (ASARCO) property is the focus of this investigation (Figure 1, 6, 9).

Since approximately 1969 to 1974, the Federal Lead Smelter – East Side property was an aluminum smelter that manufactured cans and was owned by the US Reduction Company, in 1986 the site was sold to American Can Company which became Primerica. This company was then merged with Travelers in 1993 and in 1998 Travelers then merged with Citigroup. MRC Holdings is a subsidiary of Citigroup and is the present-day owner of the abandoned facility. The aluminum smelter has been inactive since approximately 1974. Some structures remain on the abandoned property and are heavily dilapidated.

2.3 Previous Investigations

In February 2011 a complaint was made to the Illinois EPA Office of Emergency Response/Toxic Substance Control Act (TSCA) Unit concerning the Federal Lead Smelter -East Side property about the presence of vintage transformers. In February 2011 the Illinois EPAs Collinsville Regional Office conducted a Citizens Complaint Inspection of the facility. The inspection consisted of a walk through and documentation of existing transformers. The citizen complaint pertained to the possibility of the transformers leaking.

A TSCA investigation was performed by Illinois EPA and conducted on April 12, 2011. The objective of the investigation was to document the facility's handling, storage, disposal practices, and compliance with PCB regulations. During the investigation transformers were found in a chain link fence, and there was evidence that a cutting torch had been used to cut out one side of the unit and remove internal parts. Samples were collected from the transformers and the adjacent soil on the ground. The samples confirmed the leaking of the transformers with the highest PCB reading of 140,000 parts per million (ppm). The owners of the abandoned property stated that they were not aware of the transformer and capacitators present onsite. Illinois EPA recommended that an environmental contractor be hired to clean up the PCB contamination.

Michael Baker Jr., Inc was hired by MRC Holdings, Inc. to complete work necessary to remediate the site of the PCB contamination present at the 10 Cut Street site. The site investigation and clean up was completed between March thru October of 2012. During this investigation, no other potential environmental concerns, other than the PCB contamination, associated with the site were investigated or remediated. The remediation of the site included the demolition of the transform shell and pad, the switchgear building and equipment, and excavation of removal of PCB impacted soils. The remedial objectives for the PCB on-site was 25000 ug/kg. Confirmation sampling was done on the excavation and

demolition. Approximately 169 tons of PCB impacted soil and construction debris was removed and disposed of offsite (Baker 2013).

In May 2017 Illinois EPA completed a Pre-CERCLIS Screening on the Federal Lead Smelter – East Side property. During the investigation, information was gathered on the history of the property such as previous uses of the property and other investigations that had performed on the property (Illinois EPA 2017).

2.4 Regulatory Status

Based upon available file information the Federal Lead Smelter (ASARCO)-East Side does not appear to be subject to Resource Conservation and Recovery Act (RCRA) corrective action authorities. Information currently available does not indicate that the site is under the authority of the atomic Energy Act (AEA), Uranium Mine Tailings Action (UMTRCA), or the Federal Insecticide Fungicide or Rodenticide Act (FIFRA).

In 2011 MRC Holdings was notified by the Illinois EPA that they had received information concerning the possible presence of transformers containing Polychlorinated biphenyls (PCB) fluid. An inspection by Illinois EPA, under the Toxic Substances Control Act (TSCA), confirmed the presence of PCB containing transformers present near the Aluminum Smelter Building. Michael Baker Jr., Inc. was hired by MRC Holdings to investigate and remediate PCB releases at the former Aluminum Smelter Plant. During Michael Baker Jr., Inc's investigation in 2013 it was confirmed that PCB material at levels of 45,600 ug/kg was present on site. Based on the results from the site investigation activities and in consultation with MRC, it was decided to modify the site Remediation Objectives to meet Low Occupancy standards, which required the implementation of a deed restriction. It is not known if the deed restriction was ever

implemented. PCB cleanup activities included the demolition of the Transformer Shell and Pad, the Switchgear Building and equipment, and excavation and removal of PCB impacted soils. These cleanup activities were administered under the US EPA Self Implemented On-Site Cleanup (SIOC) Program. A total of approximately 169 tons of PCB impacted soil and construction debris was removed and disposed of offsite (Baker). No other activity or cleanup has occurred at the site since 2013.

Section 3.0 Field Inspection Activities

3.1 Field Inspection

On September 27, 2017 Illinois EPA Office of Site Evaluation (OSE) met with representatives of MRC Holding and conducted a site reconnaissance of the Federal Lead Smelter-East Side property to evaluate site conditions and to collect X-Ray Fluorescence (XRF) readings of the 10 Cut Street property. Photos of the site can be found in Appendix A. The Illinois Office of Site Evaluation collected approximately 25 XRF readings from the 10 Cut Street site (Figure 4). The XRF readings were collected randomly around the property (Figure 2) from the surface of the ground, in-situ. The XRF results can be found in Table 1. The abandoned facility is located in a heavy industrial area with other manufacturing businesses located nearby (Figure 1). There are no schools or daycare facilities located within a one-mile radius of the site. The nearest school is approximately 1.5 miles from the site facility, and there are no residences within 200 feet of the site. The highest reading for lead was 165,000 parts per million which are in exceedance of industrial/commercial Remedial Management Levels (RML).

Section 4.0 Pathway Discussions

4.1 Groundwater

Drinking water for the City of Alton is supplied by the Illinois American Water Company Alton Division community water supply. The Mississippi River serves as the primary source for Alton's water supply. Alton draws surface water from the Mississippi River through two water intakes. The surface water intake is located approximately 4 miles upstream of the site (Figure 7). Figure 10 shows the surface water intakes located downstream of the site. There are no surface water intakes within the 15-mile target distance limit of the site. The supply provides approximately 9 million gallons per day to a population of approximately 72,000 people in Madison, Jersey and Macoupin Counties.

On-site surface water and groundwater flows in a southwestern direction towards the Mississippi River. There are no known targets impacted by the groundwater pathway at this time. The groundwater pathway is of little concern since potable drinking water is being supplied by the Illinois American Water Company, which uses the Mississippi River as its source.

4.2 Surface Water

The surface water pathway is the most likely pathway to be completed. According to the United States Geological Survey (USGS) topo maps for the Alton Quadrangle, the site is located approximately 430 feet above mean sea level. The property then slopes dramatically by approximately 30 feet to the south towards the Mississippi River. The vast majority of the property is flat except for the extreme southern portion. Aside from the concrete lined surface water impoundment, there are no surface water bodies located onsite. There are surface water bodies located just south of the site at the bottom of the slope between the Mississippi River and the facility (Figure 8).

According to flood insurance maps dated from 1982 the property is not included in a 100 or 500-year floodplain but in late December 2015, a 100-year flood occurred and the area received over 9 inches of rain in a three day period. This rainfall event prompted the United States Army Corp of Engineer to flood the lowland area just south of the property. The facility is protected from flooding by the Wood River Levee System just south of the site and along the Mississippi River. Also, directly south of the property is the Mel Price Dam that was completed in 1994.

The National Wetlands Inventory map indicated the presence of approximately 3200 feet of wetlands located on the site as well as wetlands located just south of the property between the Mississippi River and the facility (Figure 3). Surface water runoff from the property interacts with the wetlands at the bottom of the slope on the south side of the property (Figure 3). The nearest surface water body that would be used as a fishery is the Mississippi River located approximately 2000 feet to the south of the property. The surface water pathway is the most likely impacted especially due to the XRF readings of high lead found on the property and the presence of wetlands.

4.3 Soil Exposure

The facility is currently inactive and surrounded by a fence on the western and northern portion of the site. It is not known at this time if the fence surrounds the entire property. At the time of the site reconnaissance, there was a gated fence at the north entrance but there was no guard on duty at the time. The facility is situated in an industrial development of Alton and surrounded by many industrial businesses such as Alton Steel. There have been reports of trespassing and unauthorized people residing on the property. The property consists of a few old buildings left over from the lead smelting processes that took place on the property. There are also the remnants of the old aluminum smelting building located on the east side of the property (Figure 1). There has been remediation of PCB containing transformers and contaminated soil that was in the aluminum smelting structure. The data

from approximately 25 XRF samples showed high readings of lead (up to 165,000 ppm) that were above Remedial Management Levels (RML) of 800 parts per million for industrial soil samples in almost every reading collected in the shallow soil (Figure 2). The soil exposure pathway is of potential concern due to these high lead readings and the wetlands located to the south of the property. The population in the area is minimal, as shown in the following table, due to the location of the site being in an industrial development area.

Distance	Population
0-1/4	0
¼-1/2	0
½-1	547

2010 Census data using ArcView

4.4 Air Pathway

The air pathway is not thought to be of concern at this time. There were no air samples collected at the site during the Preliminary Assessment.

Section 5.0 Summary

The purpose of this investigation was to assess possible lead contamination associated with the Federal Lead Smelters past operations associated with this property. This facility was chosen for assessment since this eastern portion of the Federal Lead Smelter site was not included in the original

bankruptcy cleanup of the former ASARCO property which is located directly west. The pathways of most concern for this property include the surface water pathway and the soil exposure pathway. Through the soil exposure pathway, the high levels of lead have the potential to impact the wetlands located in the southern portion of the property. During the site reconnaissance, samples were not collected in the wetlands but due to the XRF samples that were collected in nearby soil, there is a high probability of lead to be present within them.

The surface water pathway is also of concern due to the wetlands present on the property and the slope of the property to the south. The high levels of lead found in the soil are concern for potential water runoff into the wetlands due to the operations that took place on site. No XRF samples were collected in the wetland area during the reconnaissance but a high probability exists for potential impact of the wetlands.

The groundwater pathway is of little concern at this time due to potable drinking water for the area being supplied by the Illinois American Water Company, which uses the Mississippi River as the primary drinking water source.

Section 6.0 References

- Remediation Completion Report, Former Federated Metals Site, East Alton, IL, MRC Holdings, Inc, Michael Baker Jr. Inc.; April 2013

- Remedial Investigation Report, Federal Lead Smelter, Environ, July 2012.

- Pre CERCLA Screening, Illinois EPA, May 11, 2017.

Preliminary Close Out Report, Federal Lead Smelter, Ramboll Environ, March 2016

FIGURES

Figure 1
Site Map

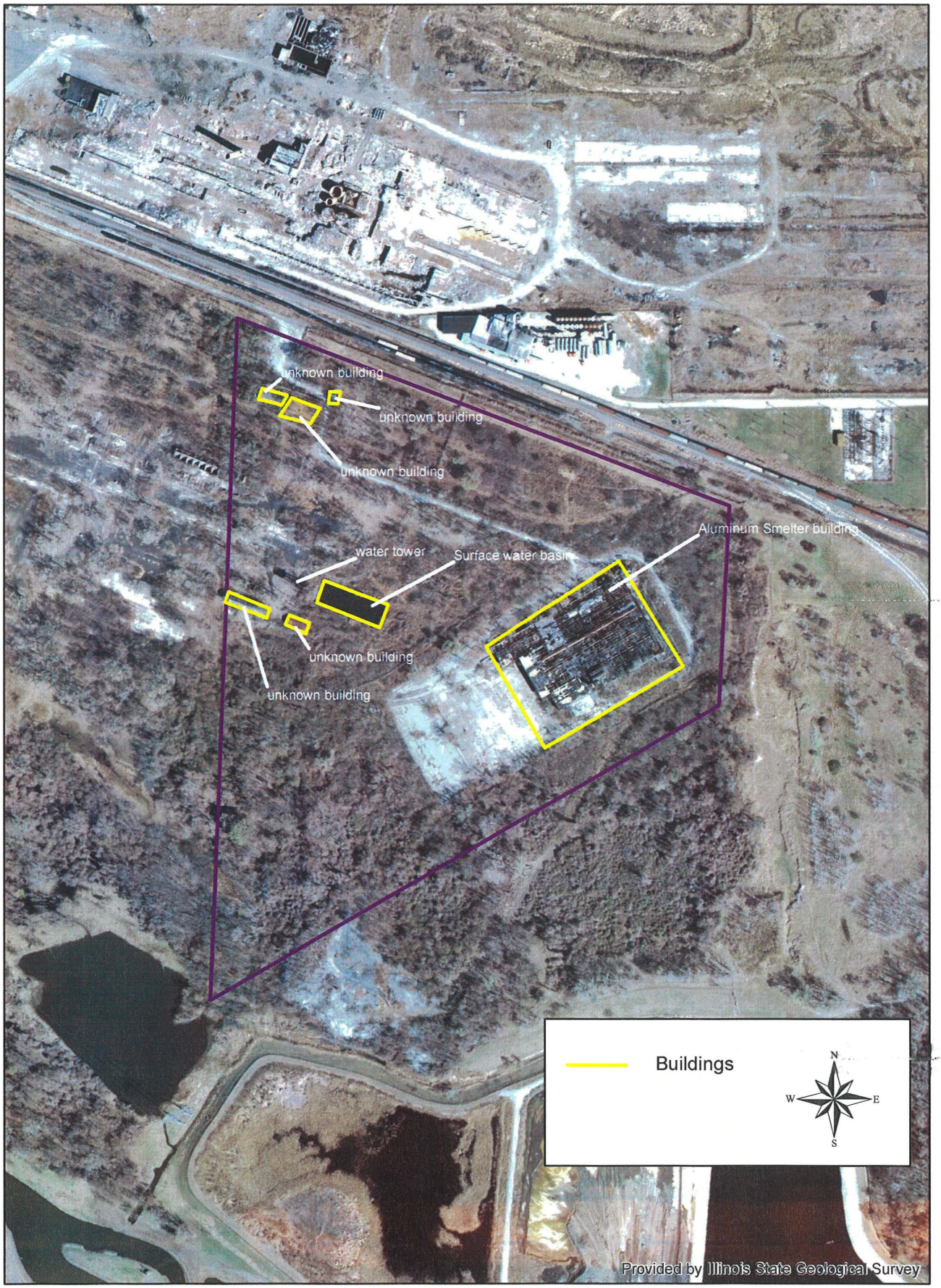


Figure 2
XRF Locations

Figure 3
Wetlands Map

Figure 4
XRF Data (PPM)
Federal Lead Smelter - East Side

Date	Time	Reading	Pb	Pb	Zn	Zn	As	As	Cd	Cd
9/27/2017	12:20:23	#4	22326	824	2973	159	ND		164	33
9/27/2017	12:22:52	#5	28113	1125	2894	171	ND		ND	
9/27/2017	12:25:57	#6	43071	1729	2811	172	1754	341	ND	
9/27/2017	12:31:30	#7	28121	1117	4969	252	ND		248	35
9/27/2017	12:37:33	#8	14552	579	4280	217	ND		98	31
9/27/2017	12:40:44	#9	1570	103	1724	126	ND		105	35
9/27/2017	12:43:32	#10	22274	1233	5051	350	1197	324	210	43
9/27/2017	12:55:08	#11	11202	374	6143	237	ND		101	25
9/27/2017	13:00:13	#12	11417	473	2198	138	589	168	120	34
9/27/2017	13:02:15	#13	7351	308	1099	87	ND		ND	
9/27/2017	13:04:12	#14	6482	253	1011	76	ND		ND	
9/27/2017	13:06:04	#15	6085	202	6450	230	ND		104	24
9/27/2017	13:17:20	#16	164884	10263	7464	567	8328	1122	291	79
9/27/2017	13:19:22	#17	104204	5876	3520	288	ND		ND	
9/27/2017	13:22:46	#18	42679	1663	1928	131	ND		ND	
9/27/2017	13:25:04	#19	31734	1010	1078	76	756	229	ND	
9/27/2017	13:27:36	#20	4189	132	986	56	231	69	63	20
9/27/2017	13:35:31	#21	43	12	360	34	ND		ND	
9/27/2017	13:37:55	#22	447	30	2301	94	ND		ND	
9/27/2017	13:40:00	#23	194	26	8308	316	ND		ND	
9/27/2017	13:44:15	#24	718	35	1692	69	ND		ND	
9/27/2017	13:47:00	#25	12869	488	12161	487	ND		85	28
9/27/2017	13:53:43	#26	216	29	341	44	ND		ND	
9/27/2017	14:02:47	#27	6335	231	2530	126	ND		137	28
9/27/2017	14:09:27	#28	65528	2726	2378	164	4001	466	ND	

Figure 4 (cont.)

XRF Data (PPM)

Federal Lead Smelter - East Side

Ti	Ti	Cr	Cr	Mn	Mn	Fe	Fe	Cu	Cu
1669	273	ND		404	45	45754	1843	749	83
2323	333	ND		308	50	78042	3261	1071	108
1552	255	ND		271	38	46478	2080	1253	120
2573	347	ND		392	52	98306	4011	1444	128
2025	314	144	43	593	61	65931	2681	1593	127
6482	846	ND		357	80	105824	4617	171	57
2213	552	ND		5120	341	813865	43282	2329	227
1813	280	ND		1049	71	54905	1869	669	67
2594	383	156	49	398	58	81332	3318	1103	106
2872	378	ND		263	48	33846	1473	490	69
1688	231	ND		328	38	53694	2015	732	76
1633	218	207	32	645	48	24562	874	7959	290
863	262	ND		325	51	85517	5686	3861	375
2505	403	ND		421	61	118797	6992	2480	253
2070	291	ND		383	45	87025	3562	1146	112
1066	187	ND		294	33	41770	1491	1119	89
1286	177	ND		320	31	28387	872	669	54
3209	227	85	19	572	38	5545	259	1975	92
487	135	87	22	539	38	18401	612	2482	111
1468	257	646	63	2729	153	16265	715	2959	159
650	117	ND		399	30	15774	492	667	48
1976	342	534	65	676	68	101537	3774	15629	630
ND		ND		229	37	8730	500	263	49
3158	382	ND		1205	85	92498	3074	2308	133
1946	273	116	35	373	44	65970	2976	2671	195

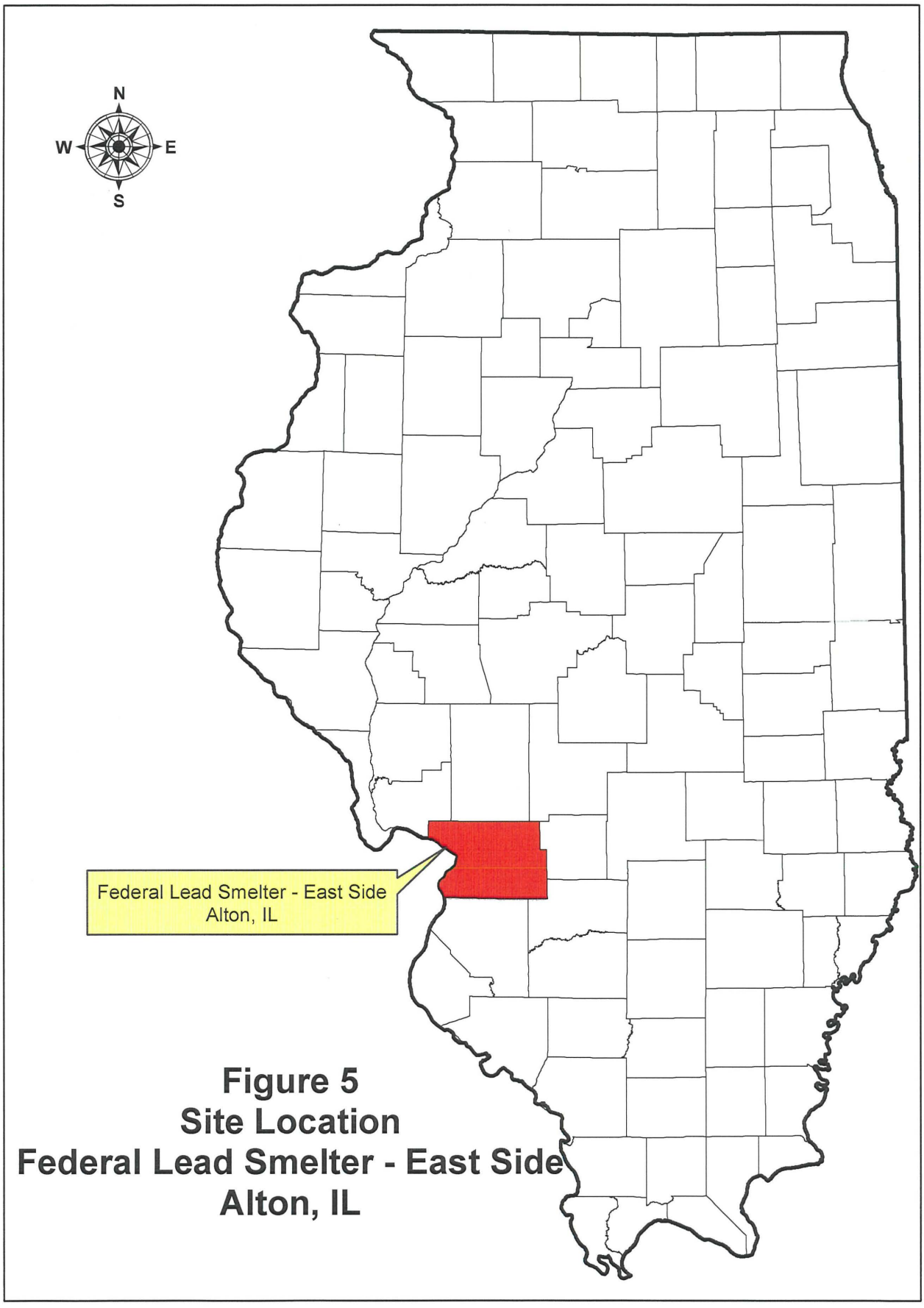


Figure 5
Site Location
Federal Lead Smelter - East Side
Alton, IL

Figure6

1941 Photo of Federal Lead Smelter and Federal Lead Smelter - East Side

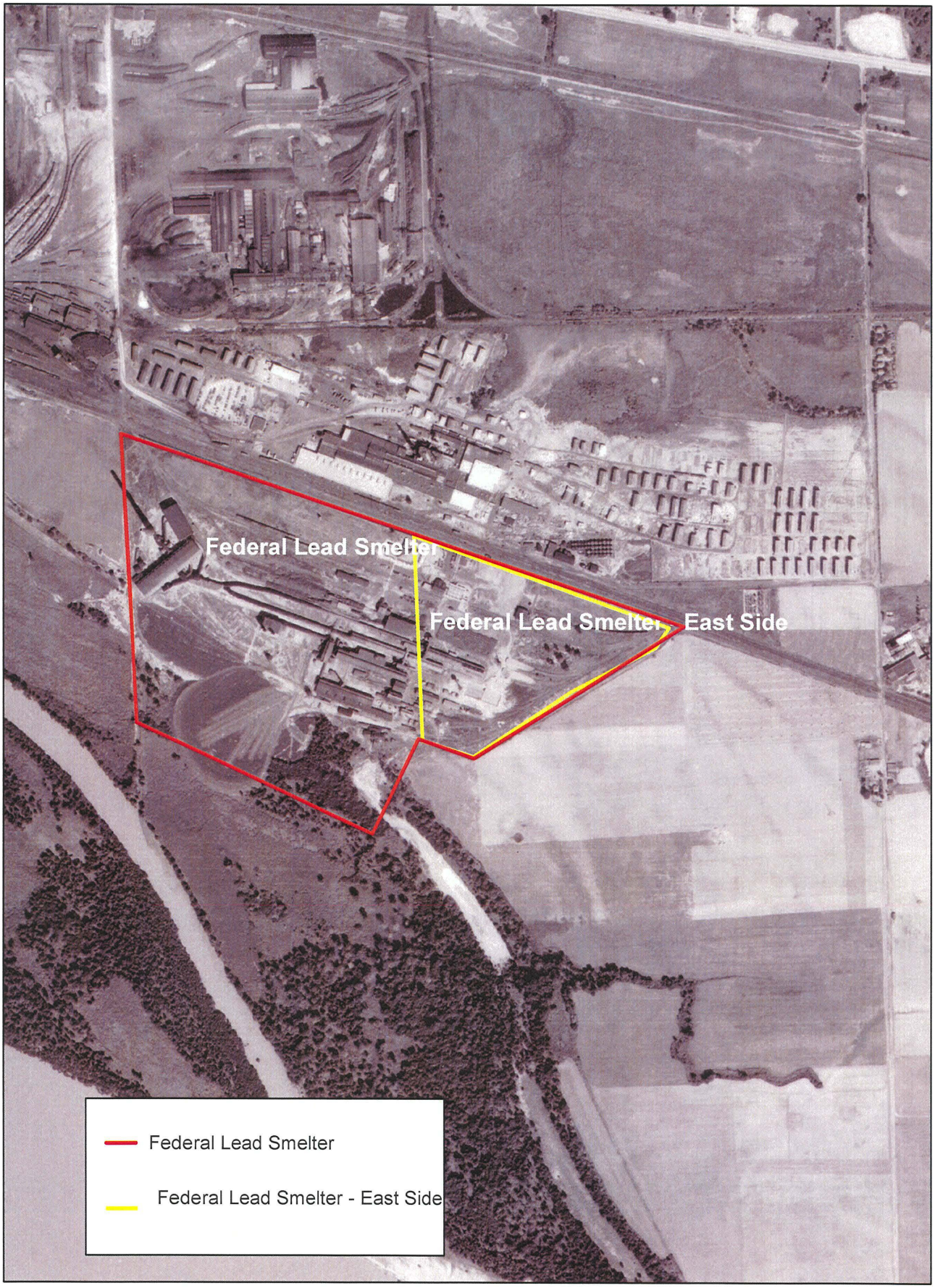


Figure 7
Surface Water Intakes

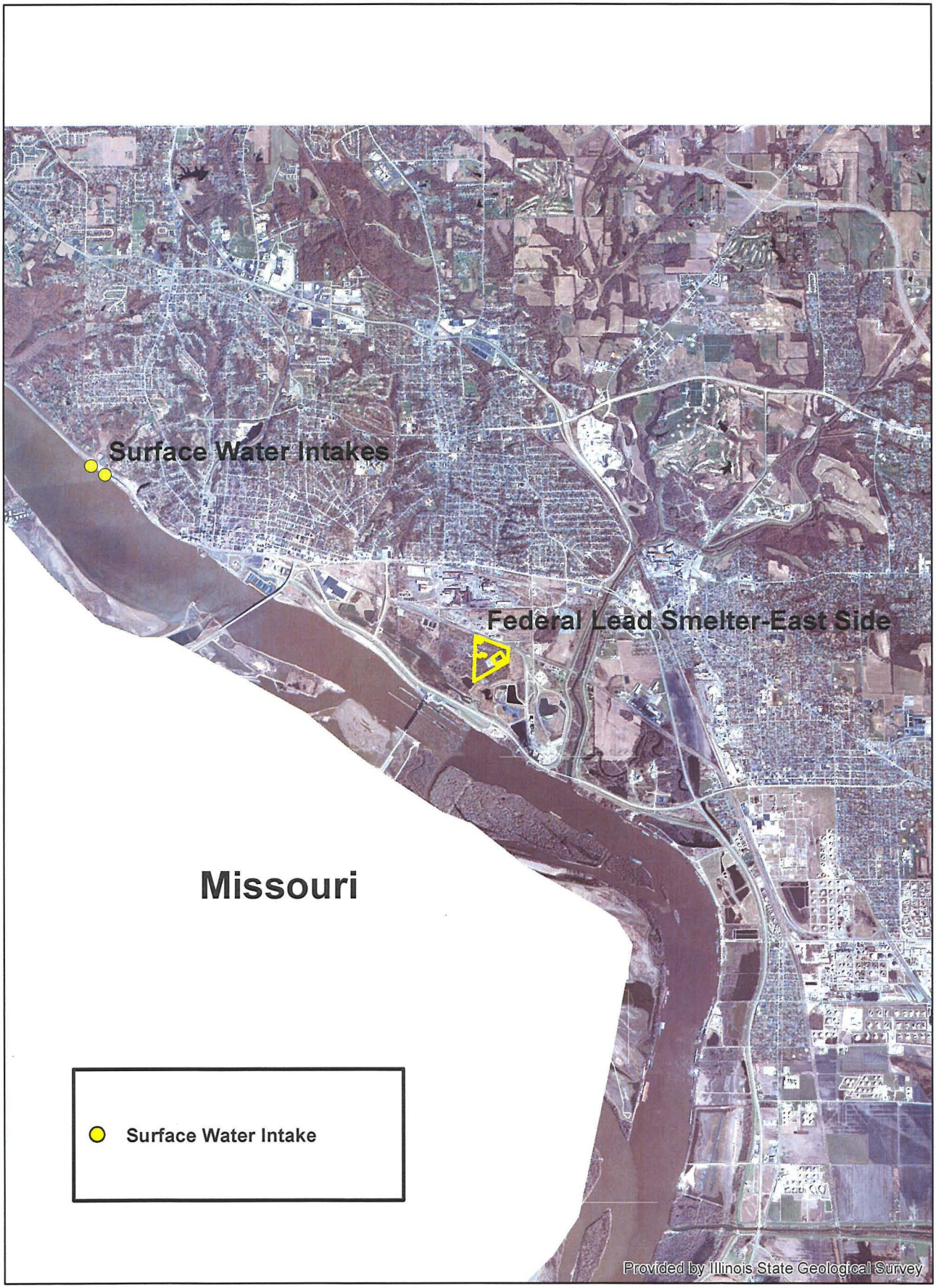


Figure 8
Surface Water

Figure9
1941 Photo of Federal Lead Smelter and Modern Day Photo
Federal Lead Smelter - East Side

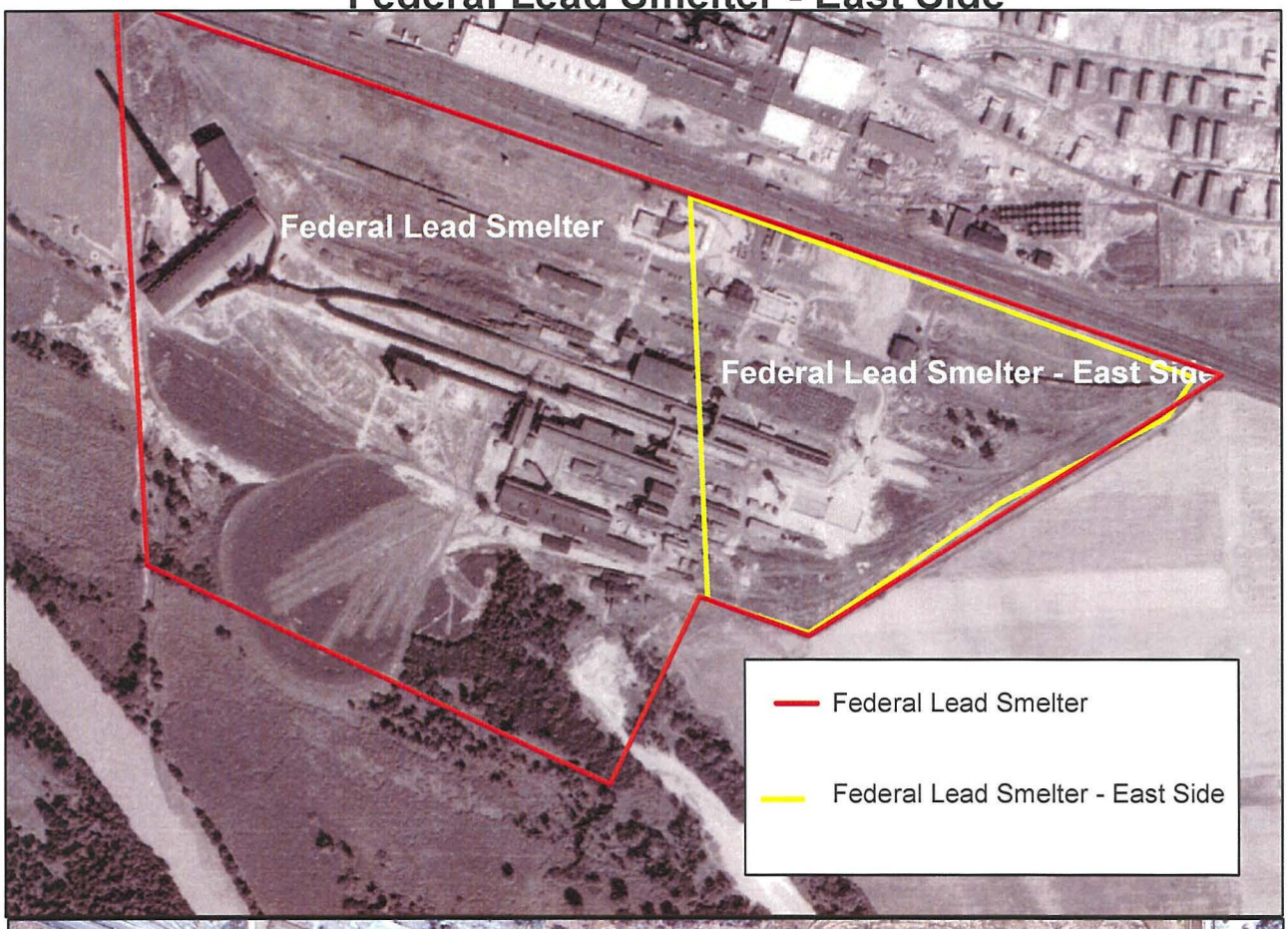
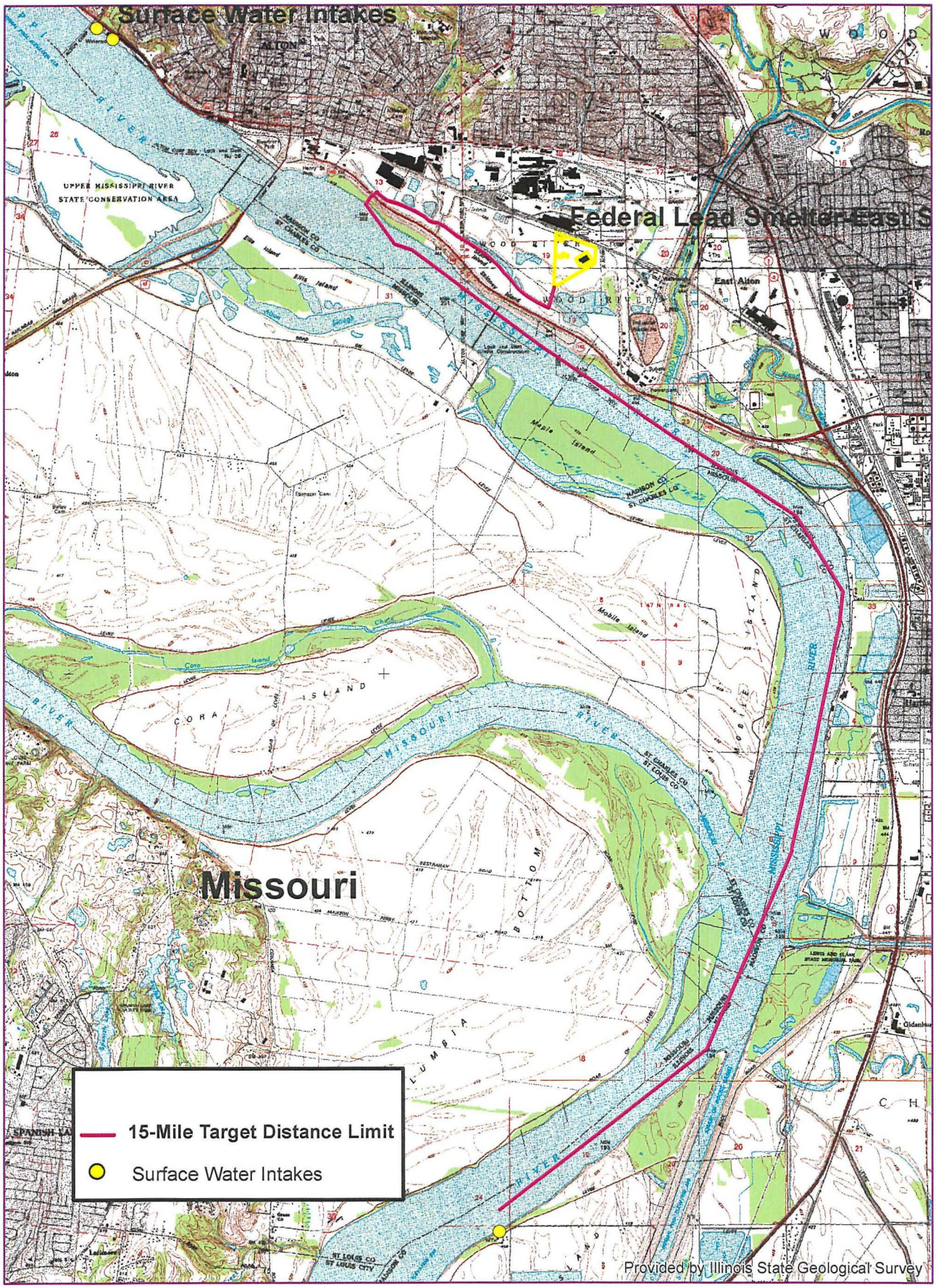


Figure 10
15-Mile Target Distance Limit



APPENDIX

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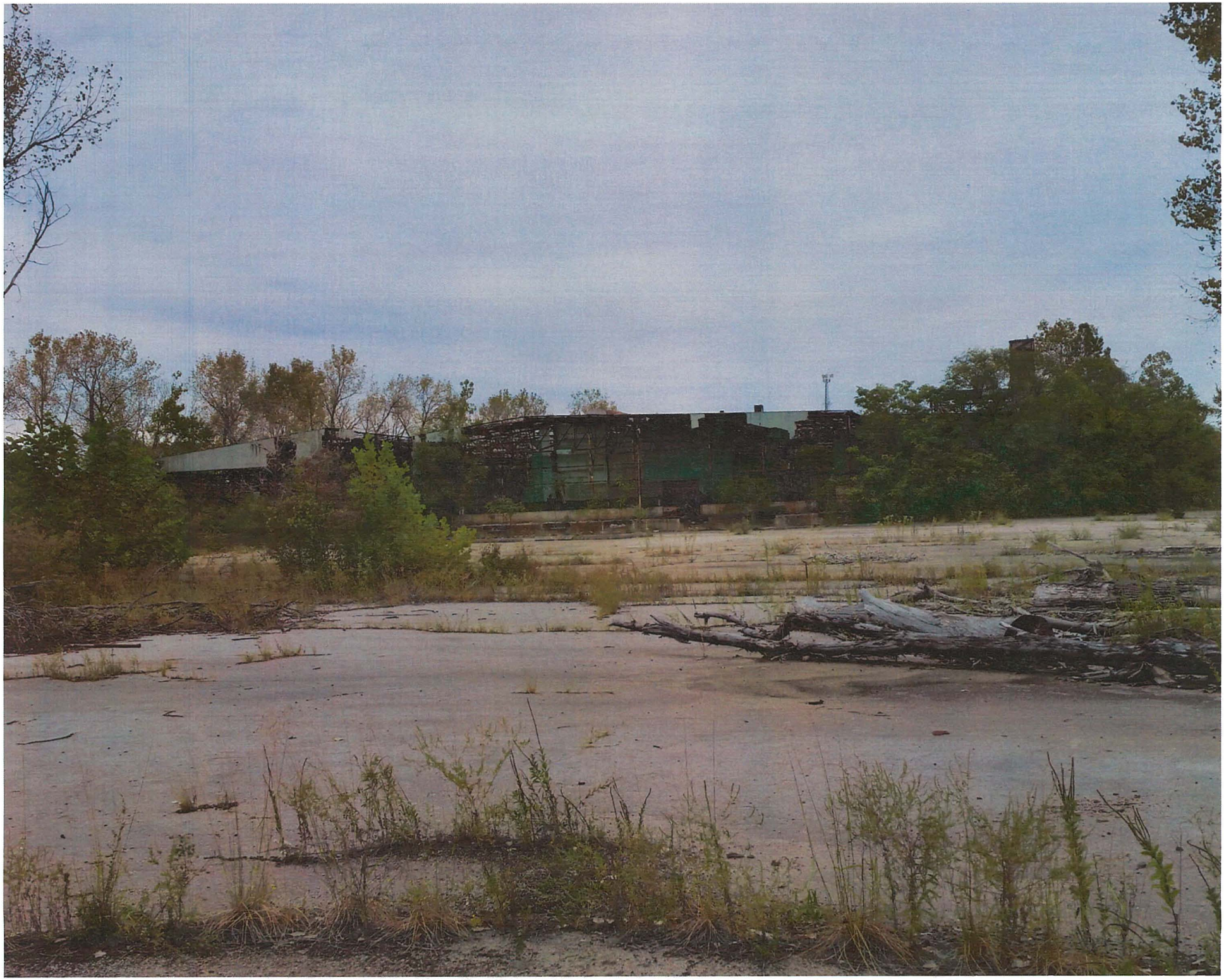

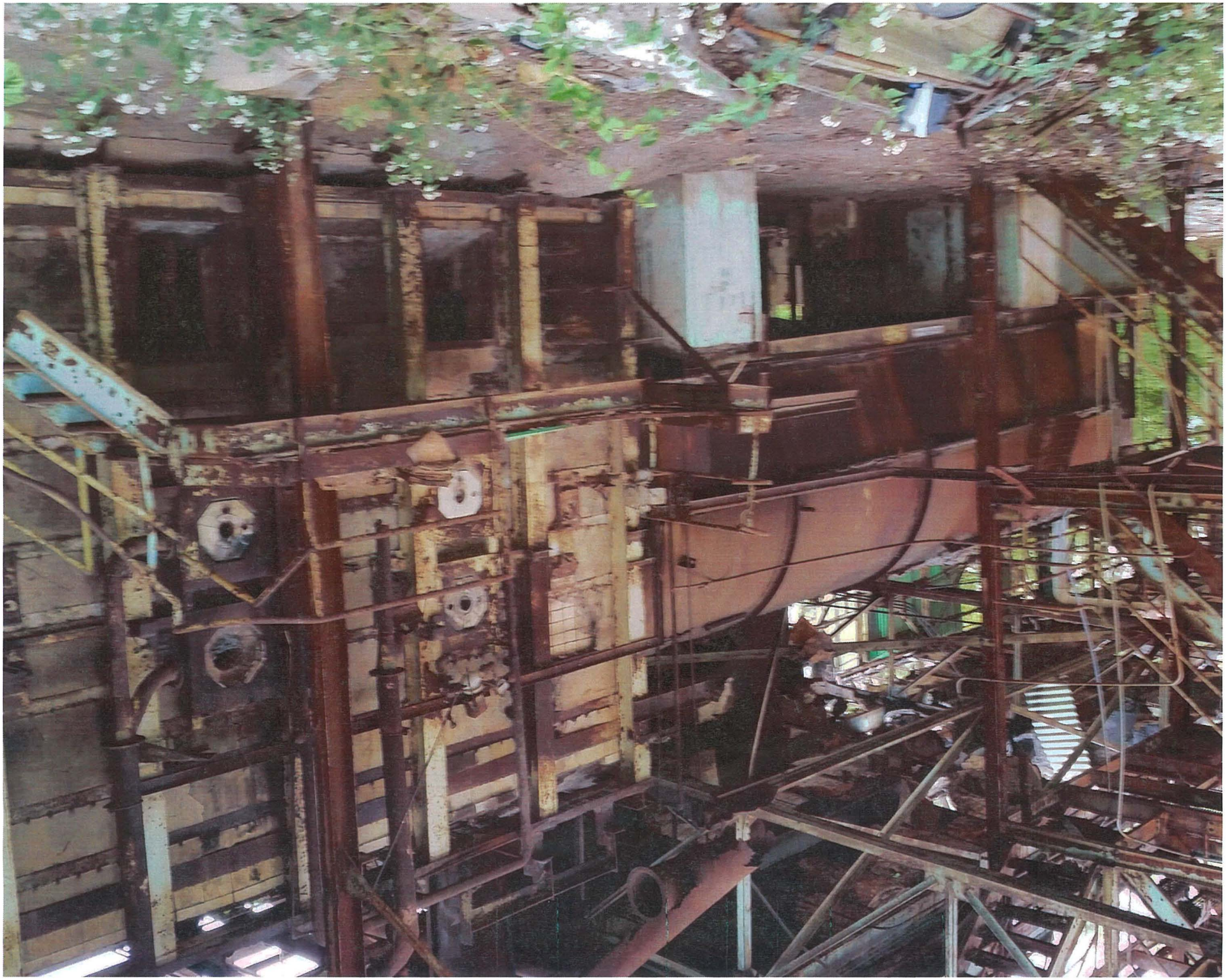


SIREN
1 BLAST FOR
FLOORMAN.
3 SHORT BLAST FO
EMERGENCY
EVACUATION.